

SIM2 Polyclonal Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP54683**Specification****SIM2 Polyclonal Antibody - Product Information**

Application	IHC-P, IHC-F, IF, ICC, E
Primary Accession	Q14190
Reactivity	Rat, Pig, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	73 KDa
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human SIM2
Epitope Specificity	321-430/667
Isotype	IgG
Purity	
affinity purified by Protein A	
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Nucleus.
SIMILARITY	Contains 1 basic helix-loop-helix (bHLH) domain. Contains 1 PAC (PAS-associated C-terminal) domain. Contains 2 PAS (PER-ARNT-SIM) domains. Contains 1 Single-minded C-terminal domain.
SUBUNIT	Efficient DNA binding requires dimerization with another bHLH protein. Heterodimer of SIM2 and ARNT.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Background Descriptions

The Per-Arnt-Sim (PAS) domain was identified as a 270 amino acid motif that mediates associations between various PAS family transcription factors. Several PAS domain family members have been identified including AhR, Arnt 1, and single-minded proteins (SIM1 and SIM2). The aromatic (aryl) hydrocarbon receptor, AhR, is a ligand dependent transcription factor that interacts with specific DNA sequences termed xenobiotic responsive elements (XREs) to activate several genes including CYP1A1, glutathione S-transferase Ya subunit and DT-diaphorase. The Ah receptor nuclear translocator protein 1 (Arnt 1) is required for ligand- dependent nuclear translocation of the Ah receptor and is also necessary for Ah receptor binding to the XRE element. Both SIM1 and SIM2 inhibit AhR/Arnt dimerization, thus inhibiting transcriptional activation. The SIM genes are thought to be involved in the directing and regionalization of tissues during development and the SIM2 gene, which is located on chromosome 21, is a candidate for the gene responsible for Down syndrome.

SIM2 Polyclonal Antibody - Additional Information

Gene ID 6493**Other Names**

Single-minded homolog 2, Class E basic helix-loop-helix protein 15, bHLHe15, SIM2, BHLHE15

Dilution

IHC-P ~ ~ N/A
IHC-F ~ ~ N/A
IF ~ ~ 1:50 ~ 200
ICC ~ ~ N/A
E ~ ~ N/A

Format

0.01M TBS(pH7.4), 0.09% (W/V) sodium azide and 50% Glyce

Storage

Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

SIM2 Polyclonal Antibody - Protein Information

Name SIM2

Synonyms BHLHE15

Function

Transcription factor that may be a master gene of CNS development in cooperation with Arnt. It may have pleiotropic effects in the tissues expressed during development.

Cellular Location

Nucleus {ECO:0000255|PROSITE-ProRule:PRU00632, ECO:0000255|PROSITE-ProRule:PRU00981, ECO:0000269|PubMed:14697214}

SIM2 Polyclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

SIM2 Polyclonal Antibody - Images